

Favorable action on the merits is solicited.

Respectfully submitted,

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SPECIFICATION

Method for Removing N-terminal Methionine

This application is a 371 of PCT/JP99/05456 filed October 4, 1999.

FIELD OF THE INVENTION

5 This invention relates to a method for the
efficient removal, from peptides (including proteins)
or salts thereof which possess an optionally oxidized
N-terminal methionine residue or diketone of said
methionine residue, of the N-terminal methionine
10 residue or the diketone of said methionine residue, in
the presence of acetic acid and sodium formate, formic
acid and sodium formate, or formic acid and sodium
acetate; and to a method for manufacturing peptides or
salts thereof which do not possess an optionally
15 oxidized N-terminal methionine residue or diketone of
said methionine residue.

BACKGROUND ART

20 When protein is biosynthesized within a cell, its
N-terminal is known to start with methionine, which
corresponds to the initiation codon AUG of the mRNA.
However, as this methionine is removed by subsequent
processing, it is usually no longer present in the
completed mature protein molecule.

25 With advancements in recombinant DNA techniques,
it has become possible to produce useful proteins using
microorganisms and/or animal cells, for example
Escherichia coli. There have been instances wherein
protein produced via this type of method was found to
30 retain a residue comprised of the aforementioned
methionine. For example, the retention rate of
methionine was as high as approximately 100% in human
growth hormone expressed in *E. coli* [Nature, 293, 408
(1981)], and 50% in interferon- α [J. Interferon Res., 1,
35 381 (1981)], while in nonglycosylated human
interleukin-2 the presence of a molecular species with

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